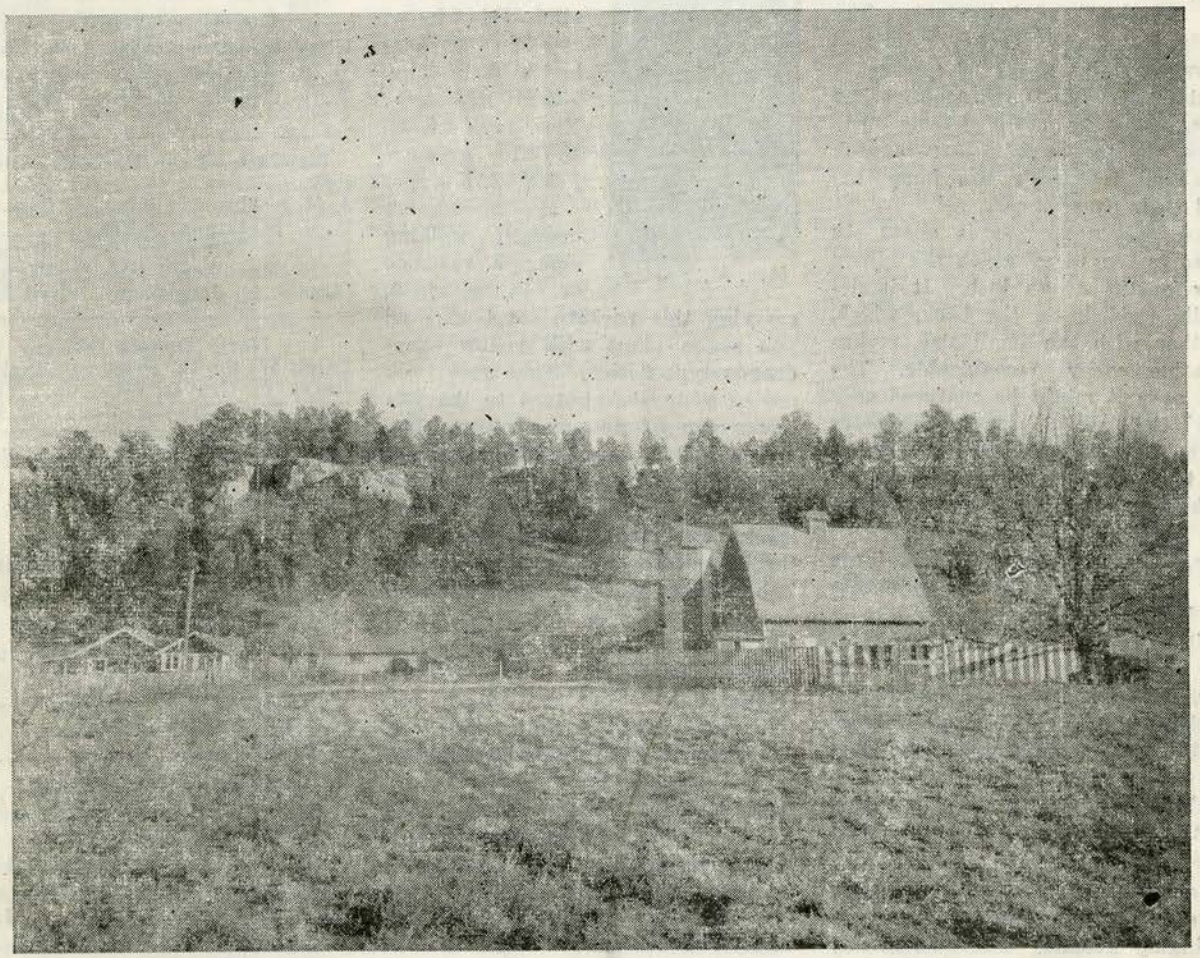
VOLUME 23 Number 8
Price 10 Cents

NORTH AND SOUTH DAKOTA HORTICULTURE

AUGUST, 1950



—Courtesy of the Chamber of Commerce, Rapid City, S. D.

Typical ranch scene in the foothills of mountainous Black Hills of South Dakota.

Plan to attend our annual meeting at Huron, September 27, 28, and 29.

THE LEAST SANDPIPER

By
O. A. Stevens

O. A. Stevens

In August, even in July, the sandpiper tribe comes scurrying back from the north. It seems they could hardly more than have reached their summer home when they are southward bound again. They waste no time building nests and the young are able to run as soon as hatched, so parental cares are brief.

The sandpipers are numerous in both species and individuals. The family, including woodcock, snipe and cur,ew, contains about 90 species of which 50 occur in North America. Of these, about 20 really belong elsewhere, for they are wide ranging birds and frequently are found beyond their usual area.

The least sandpiper is about six inches in length of which the bill is three-fourths of an inch. It is decidedly reddish on the back, which, together with the small size, makes it rather easily recognizable. The book says it might be confused only with the semipalmated sandpiper which has webs between the bases of the toes and yellowish instead of black legs. The two kinds are often seen together.

Dr. Roberts states that these birds may appear in southern Minnesota the first of April, but chiefly late in April and May, beginning to reappear in northern Minnesota early in July. They nest from northwestern Alaska and northern British Columbia to Newfoundland and Nova Scotia. In winter they occur from southern California, Texas, and North Carolina to Brazil and central Patagonia.

Nests are placed in wet grassy places near the water or sometimes on higher ground. The bird merely scratches the grass or moss out a little and molds a hollow spot with its body. A few dry leaves may be added. Four eggs are usually laid. They are a little more than an inch long, pointed, yellowish or greenish with various spots of brown. It is believed that the male does most of the incubating.

The birds feed largely upon small aquatic animals and insects. Small seeds are sometimes eaten. They are seen in flocks on mud flats, often mixed with other species. From their calls they are often known as "peeps." They are unwary and formerly were often killed as game. Now they are protected by law and have returned in numbers at some places where they had become scarce.

BOOK REVIEW

By
Mrs. Morris Harter

Mrs. M. Harter

Wild Flowers at a Glance, by M. C. Carey and Dorothy Fitchew. Published by Pellegrini & Cudahy, 333 Sixth Ave., New York 14, N. Y. 275 pages. Price $2.75.

Mentally picture yourself walking along a roadside or in a field, carrying this pocket-sized book, and you see a plant with yellow snapdragon type flower. Take your book out of your pocket, turn to the yellow group of flowers on page 146. You will find your flower completely illustrated and identified. It is of the figwort family, its common name being yellow toadflax or butter and eggs the botanical name Linaria vulgaris. The height of the plant, when in flower where it is found, and characteristics of the plant make up the written description. The wonderful colored illustrations are done in full color and minute detail. Many of our common wild floyers originated in Europe and got their start here from seed that came in such things as ship ballast and sheep wool. This is the only publication in the country with colored illustrations which indicate British plants that have become wild in this country. In the 264 illustrations you will find many of the more common flowers that have been passed over by other wild flower publications. As a finishing touch a six inch rule is printed on the back cover.

Vol. 23 August, 1950 No. 8

Entered as second class matter at the Post Office at Sioux Falls, S. Dak., under the act of August 24, 1912. Original office of entry, Pierre, S. D.

Membership in the South Dakota State Horticultural Society is one dollar per year; fifty cents of this amount is for the subscription to "North and South Dakota Horticulture." The subscription rate for affiliated organizations is fifty cents per member, per year.

Published monthly at Sioux Falls, S. Dak., by the North and South Dakota State Horticultural Societies. Address all communications to W. A. Simmons, Secretary, Horticultural Office, Court House, Sioux Falls, S. D.

TABLE OF CONTENTS

NEWSLANTS

By

Harry Graves

H. A. Graves

We have been on vacation this week. I wouldn't say it was a rest exactly, but it was a change anyhow — which some practical joker once said was "as good as a rest." At any rate, we got a lot of jobs done that have been in the planning stage for month—yea. even years. The climbing rose, that hasn't bloomed for three years and has crowded the better fashion floribunda alongside, got ignominiously moved to a less conspicuous spot. Too bad, but if it gets busy and shows it can bloom elsewhere it may get a more favored location later. The very ordinary peony, that was crowding both one of the Fashions as well as a nice vine of Clematis Jackmanii and got yanked out and set in the back yard. 'Tis no time for such work and they may all die, but if so, it will be a small loss.

One day we won't soon forget—July 13, 1950. On this day we spent the afternoon and a large share of the evening with the Olaf Henriksons at Fort Ransom. I would tell you more about it but I don't want to start a stampede in that direction. The scenery is beyoynd my powers of description. There may be more beautiful spots in North Dakota than the Fort Ransom community but I am sure there is nothing quite like it. The Henriksons' yard contains a large collection of horticultural species and varieties. Three hundred plants of peonies alone make quite a show when in full bloom. Two trees of Bechtel's Flowering crab are healthy but out of bloom when we were there. Many other fruit trees were thrifty—testifying to the often repeated statement that an east slope is the best place to grow trees and shrubs of all kinds. Deer and field mice wage a continuous battle with the Henriksons for possession of much of their plant material. The 15-year-old log house—I venture to say—is the best log building ever built. The logs are tongued and grooved. The method of interlocking the logs at the corners is unique. A stout foundation of field stone supports the house.

Steps are being taken to make a memorial planting of plants from the garden of the late W. E. H. Porter. The planting will be made in the International Peace Garden where many of Mr. Porter's friends will visit it in years to come. Your secretary met with W. R. Leslie, Russell Reid and Mr. Tinline at the Peace Garden on July 6. Mr. Tinline is supervising the work now being carried on in the Garden area. Mr. Leslie and Mr. Tinline will label a representative collection of species in the Garden this month. These will be moved to a temporary planting in the Peace Garden Nursery this fall and a permanent planting and suitable plague established at the earliest practical opportunity. Harry Porter W. E. H. Porter's son) and Leonard Graetz of Hansboro are cooperating in helping with the locating and movement of the plants. Thus another step has been taken in carrying out the wish of Mr. Porter who provided money for such a planting in the early 1940's.

We assume that this has been an unusually good year for radishes. Or, maybe it is the fact that we planted some super duper radish seed. Anyhow, we have had several gallons of excellent radishes this year. Through the kindness of George Bird of O. H. Will & Company we planted some pelleted white Icicle and some Saxa and Sparkler—the latter seed from transplanted roots. They were all excellent. The pelleted seed was much easier to plant and subsequent plants required no thinning. Pelleted seed requires considerable moisture in order to sprout it—we were not lacking for moisture in the Red River Valley this spring!

Last year there were many complaints in Fargo over gardens suddenly doing poorly. At first glance and even after, reviewing the recent past history of the plots there seemed little explanation. In every case, however, large trees were sending their feeding roots into the garden area—in some cases several large trees. Still, how come the gardens suddenly began to decline in 1948-49? Well, back in the 1930's these trees were smaller. During much of the 40's there was abundant moisture for both trees and gardens. During the 40's also, the trees made a tremendous growth. With the coming of drier seasons and the larger trees making greater demands in 1948 and 1949, the competition for both moisture and plant food was more keen. The gardens are coming off second best. You cannot grow good gardens and large trees in the same area!

Chris Geir, of Edinburg, says the past three winters have been the most severe on fruit trees of the last 49. Chris should know. We don't have many members who have observed the behavior of horticultural plants as closely as Chris has during the past half century.

As the result of a plant premium 8 or 9 years ago, the Guy Cooks of Carrington have been sharing Ruddy raspberry plants with their neighbors and enjoying the fruits from their own planting ever since. Ruddy has not been as popular as the reds for commercial planting but has gone over big when given a fair trial in the home garden.

Bill called in a plumber to fix an upstairs faucet and as he and his wife were coming downstairs they met the plumber coming up. Bill said:

"Before I go downstairs I would like to acquaint you with the cause of the trouble."

The plumber politely removed his hat and murmured: "Please to meet you ma'am."

It is doubtful if an acre of any other economic crop plant in the temperate zone can closely approach the food energy production of an acre of sugar beets.—U. S. Dept. of Agriculture.

Nurse (in insane asylum): There's a man outside who wants to know if we have lost an inmate.

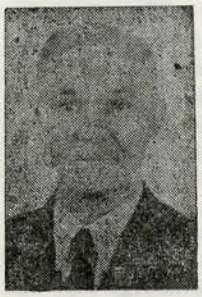
Doctor: Why

Nurse: He says some one has run off with his wife.—Better Crops.

Take time to be courteous. It always pays.

MANITOBA NEWS LETTER

By
W. R. Leslie



W. R. Leslie

Spring is the anticipated reward at the end of winter. The dormant season has its own charms but this year these wore thin in appeal because of their hesitancy in giving way to the warm balmy days which swell buds, green up the grass and bring forth early flowers. Even the song birds had an undue wait for conditions which permitted them to migrate back to their nesting homes.

Bloom on the Daphne willow and the Speckled alder were more than a fortnight later than usual. These are ever expected to usher in the new season. Similarly the first foliage on Cherry prinsepia, native gooseberry and European red elder were long delayed in making appearance. One compensation from the weatherman was the moderate night temperatures—the lowest in May. coming in mid-month, amounted to only 3 degrees of frost. A result is that substantial crops of tree fruits, native fruits and berry crops are in prosopect.

When the spring pageant of blossoms began in the orchard with the opening of a maze of pink buds on the Siberian apricot trees, the procession moved at lively pace. Plums, cherry-plums, pears, cherries and apples quickly put on their displays. These were particularly generous this year. Blossomtime was luxuriant.

The Japanese quince was struck back by severe prolonged cold, but little winter injury is observed in the orchard trees. The heavy snowfall that came early, and stayed, was kindly to lowly plants. Grapes which are laid down in October had a comfortable dormant season. It is of interest that a large vine of Fredonia grape, planted to the south of an 18-foot field caragana hedge, again wintered very well without an artificial mulch of any kind. Of course, good husbandry in these prairies involves a soil covering of from 8 to 10 inches over the pruned vines of commercial grapes to assure maintenance of vigorous vitality. The fact does remain that Fredonia on the south of a hedge has been productive annually for six years without any special tucking-in.

One of the keenest delights of the gardener in a belated spring is to rejoice in the birds as they return to flit about and sing and raise their 1950 families. They are all back now as the fly-catchers and swallows and nectar-sippers have a supply of their specific foods. Meadowlarks, robins, brown thrashers, catbirds, warblers and Baltimore orioles have seemed unusually generous with their voices this spring. They perform for the earlp risers as well as for the evening gardeners.

Spring Glory is found in a number of waves. As the harsh voice of the crow sounds stirring with charm on March 17th, so the bloom of apricots, almonds and plums are very uplifting as they lead the scenic parade of arresting spring bloom, in late April or early May. However, the two most exhilarating displays of floral show come one to three weeks later at the Morden Experimental Station. The first, and probably the most aristocratic is that of the ornamental crabapples. The second highlight is that of the hybrid lilacs.

The feature of Ornamental Crabapples is supplied by the class commonly referred to as the Rosyblooms. They are hybrids which derive their red, pink and magenta coloring from the Redvein crabapple, a native of Turkestan.

This year apple bloom was abundant. A number of new seedlings commanded attention. At present, visitors acclaim the Almey as their first choice. The tree is relatively vigorous in growth, the flowers are extra large, bright lively red with a white star at the base of the petals. The flowers last well and fade gracefully, not developing the murky shades that come to many Rosyblooms. Almey appears to put on its show every spring whereas some sister varieties take a partial holiday every other years.

Sundog has large flowers with broad rounded petals. The pink petals carry some lilac tinting. The tree is narrow, upright.

Strathmore has many virtues. The magenta reddish flowers are less impressive because of the colored foliage. The rather smallish tree has many fine willowy branches of upright habit. The columnar habit of the tree fits it very well for properties of small and medium sizes. It requires little room and its colored foliage supplies a contrast to trees with green foliage which being not too striking in hue to prevent the eye of the beholder paying due attention too the main feature of the private estate—the house.

V. C. No. 3, developed by E. C. Hilborn, Northwest Nursery Company, Valley City, North Dakota, has showy magenta flowers. This selection was considered distinctive and valuable even before it gave proof of being a free bloomer. The copper foliage suggests this crabapple may be an answer to the need of a hardy ornamental tree to serve as an acceptable substitute for the unadapted Copper beech.

Rosybloom crabapples have brought into the modern landscape, new beauty. Their showy fruits lengthen by many weeks the season during which these trees command keen interest.

Preston lilacs are a recent valuable group of hybrids which win greatening esteem with each passing year. Blooming about two weeks after the French Vulgaris hybrids they escape late spring frost damage which may come to earlier species.

A large number of these late blooming hybrids have been named. Based on behavior at Morden this season the following have commanded praise:

Handel and Hiawatha—Two of the Dr. F. L. Skinner's hybrids which have reddish or magenta flowers and foliage that is large and dark green. Flowers on Hiawatha are rather dense in the cluster.

Harlin—A bush of beehive shape which becomes covered with bright pinky pale mauve flowers. A dense bushy type which is exceedingly full of blossoms.

Dr. Ronald Wyman — A recent Skinner introduction, is a hardy shapely bush producing numerous long-lasting reddish flowers. A valu-

(Continued on next page)

THE PERSIAN YELLOW ROSE

By

A. L. Truax, Crosby, N. D.

A. L. Truax

The quotation in Harry Graves' Newslants in the June number from S. F. Hamblin's article on yellow roses in the American Rose Magazine leads me to extend my comments on the Harison's Yellow and Persian Yellow roses as they appeared in my article, "Roses in North Dakota," in the November, 1949 number of our magazine, and to add a few words of commendation for the Persian Yellow rose.

There has been considerable confusion on the part of the public, and even nurserymen, as to the identity of these two roses, one being frequently mistaken for the other. Prof. Hamblin's article should go far towards settling this confusion.

Harison's Yellow rose was first found growing in the garden of Rev. George Folliot Harison, rector of Trinity Church, New York City, in 1830. It was once thought to be a hybrid between Rosa spinosissima and Persian Yellow, but as the latter did not appear in England until 1837 this seems hardly probable. It is now believed to have been either a seedling or a sport of the Rosa spin osissima or Scotch rose. Its prolific growth and extreme hardiness soon attracted attention, and. known as the "Yellow Brier," it was carried westward by the early pioneers as far as the Rocky Mountains and beyond.

The Persian Yellow rose was brot to England from Persia by Sir Henry Willock in 1837. Sir Henry was at that time England's minister to Persia. It was undoubtedly a hybrid or double form of Rosa foetida, or, which is the same thing, Rosa lutea. I wish the appellation "foetida" could be dropped entirely in favor of "lutea," for the former is a foul and ugly name to apply to a very beautiful rose which has, as Prof. Hamblin says, only a faint "earthy" smell. Thus it will be seen that the two roses are entirely different in origin. Prof. Hamblin has pointed out most of the other differences, but I will add a few more.

First as to the foliage: That of Harison's Yellow is fine, almost fern-like, consisting of small leaflets, usually nine to thirteen in number, while the leaflets of Persian Yellow are considerably longer, and number usually seven to nine. Any one familiar with this difference can distinguish Harison's Yellow at a glance by its fern-like foliage as compared to the almost conventional rose foliage of Persian Yellow.

Next, as to the size of the blossoms. Those of Persian Yellow are the larger, usually measuring 2½ to 3 inches in diameter as compared to about 2 inches for Harison's Yellow.

Next, as to color: Harison's is a bright yellow, almost approaching sulphur yellow, while the Persian is a deep, rich yellow, sometimes lightly streaked with orange. There is no mistaking this color, and though a very old rose, the Persian Yellow is still extensively grown in England on account of its rich golden color which is unsurpassed by any other hardy rose.

Next, as to the odors: Prof. Hamblin says that Harison's Yellow has a definite, faint fragrance. Neville F. Miller, writing in the 1950 American Rose Annual, says that on moist spring days its flowers emit an odor like hepaticas, which may be noticed over an area of many square yards. On the other hand, the faint odor of Persian Yellow is definitely not a fragrance. It seems to be principally in the leaves and wood, and I would term it a "woodsy" rather than an "earthy" smell, which to me is not disagreeable.

Next, as to stature: Persian Yellow is definitely taller and more robust in growth than Harison's, and under good cultivation will reach ten feet in length of canes. This is in spite of Profo. Hamblins statement that the Persian Yellow is a weak grower in the northern states. That may be true of New England, where Prof. Hamblin lives, but is certainly not true of the Northern Great Plains States, in all of which I have seen it growing more robustly than most hardy roses. It also suckers very freely and will hold its own anywhere. It is also just as hardy as Harison's in the severe climate of North Dakota. Another writer says that its foliage is poor. Contrarily, I find the foliage to be very good, and it thoroughly clothes the bush if the dead wood is kept cut out, as it should be.

As to season of bloom, Harison's is the earlier. The Persian comes along about a week later, thus making a succession of bloom. It is even more profuse blooming than Harison's, and its golden yellow blossoms, thickly borne along the whole length of the arching canes, form a spectacular fountain of gold. Therefore to those who want an iron-clad, beautifully colored June blooming rose, try Persian Yellow—if you can get it.

MANITOBA NEWS LETTER

(Continued on Page 116)

able new variety.

Of the Ottawa hybrids Ethel Webster and Fountain are new and seem due for general popularity. Local specimens were too young to reveal the full charm. Of the older varieties Celia, Ursula, Bellicent, Olivia, Miranda and Isabelle were impressive.

Celia—Pale violet, very numerous flowers covering the bush.

Ursula—very large bold flower head, of fuschia purple color.

Bellicent—A clear bright pink, fragrant.

Olivia—Numerous rich rose spikes, fragrant.

Miranda and Isabella are fuschia purple, with general effect being of light shades.

Among those Morden naming, Coral, Royalty, Freedom and Redwine appear to deserve wide use.

Coral is a bright glistening pink. The spike is bold in outline and flowers remain attractive until blossoms pass.

Royalty is distinctive in its deep purple color and durable outline.

Freedom suggests Harlin and Celia in being very flowerful and pale mauvy pinkish in hue. Bush is attractive for a fairly long time.

Redwine has its flower color expressed in its name. The rich shades soften with age. A feature is the extra long season of bloom.

FALL PLANTING OF GARDENS

By

By W. R. Leslie

(Continued from last month)

Grape hyacinth, scillas, tulips, fritillarias and lilies are for autumn planting. Relatively early planting ensures an extensive root system before winter takes command. Late planting calls for a mulch of slough hay, straw, corn stalks, everygreen boughs, or some other loose materials which protect against alternate freezing and thawing in early spring. One writer words it—"The protection for winter should be more like a parasol than an overcoat." A close-fitting mulch such as oak leaves may pack down flat and smother. Leaves on top of brush or corn stalks are safe.

Soil should be well-drained, in good heart but not recently manured. Acid peat can be applied with advantage. A well-prepared deep loam is excellent. Heavy or light soils are improved by an addition of leaf mould, acid peat or black loam. Bone-meal or super-phosphate applied at the rate of five to 10 pounds to a hundred square feet at planting time is approved. The fertilizer is mixed with the soil in such a manner as not to be concentrated against the bulbs.

It is well to have the soil worked 12 inches deep for tulips. Bone-meal worked into the soil under the bulbs is helpful. A layer of rotted stable manure may be placed three inches below the base of the bulbs. Plant in September if possible. The outer brown coat may either be left on or removed. Depth is with four to six inches of soil over the tip of the bulb. Large bulbs are set deep, small bulbs more shallow. Spacing is usually six to eight inches. A mulch applied in November may seldom be necessary, but adds comfort and lessens drying. Transplant when the patch becomes dense.

Siberian squills (Scilla) are hardp little bulbs which grow in shade or the open border. Their vivid blue is the earliest bloom in the plantation. Set in groups of a dozen or more, three to six inches apart and two or three rhizomes to protrude above the soil. Spacing is about 18 inches. Although optional, common practice is to clip back the sword-like leaves at three inches deep in early September.

Grape hyacinth (Muscari) is another blue subject that blooms early. Plant similarly to squills. Transplant when crowding occurs.

Plant bearded iris in August, or before mid-September. If drainage is not free, set on mounds. Clumps should be divided every third to fifth year to maintain vigor and health. Crowded clumps give inferior flowers and are predisposed to root-rot and other diseases. To transplant fork up the clumps, divide into individual rhizomes (thickened underground stems). The plant is set so that the roots are spread out in deeply-dug pulverized soil and at a depth which permits from one-quarter to half of a height of about five inches at planting, iris like lime soils.

Lilies are important summer-flowering bulbs which are becoming more and more popular in prairie gardens. Friable garden loam is satisfactory to them. Heavy clay soils need addition of sharp sand and such humus as leaf mould, acid peat or old thoroughly rotted manure. Well-drained conditions are essential but moisture should be applied during dry spells in the growing season. All should be planted in late summer. September is preferred. Depth varies with the size of the bulb. Adhering roots are preserved and treated as are other transplants. It is helpful to mix a handful or two of acid peat with the soil at the bottom of the hole. The bulb is placed in a small pocket of sharp sand or fine gravel. This provides drainage, keeps the bulbs from contact with substances in the soil which might transmit rot organisms, and tends to repel worms. Light soils indicate deeper planting than clays. Suggested depths are for the top of the bulb—Amabile, six to eight inches; Candidum, two. Centifolium, eight; Cernuum, five; Davids, eight to ten; Stenographer lilies (Grace Marshall, Muriel Conde, Coronation, etc.), eight; Henry, eight to ten; Pumilum (tenuifolium), four; Regal, eight to twelve; Superbum, (Turks-cap), six; and Tigrinum (Tiger), six to eight inches. Large bulbs such as the Regal may benefit from being planted on their side, so that moisture will drain away from their scale segments.

Lily-of-the-valley are planted as clump-divisions in September or October at about six-inch spacing. They tolerate shade and thrive among ferns on northern exposures. They like a somewhat sandy soil carrying considerable humus. They may thrive for years in their spot. An occasional top-dressing of old manure heartens the plant.

Peonies are planted in a sunny position in the fall from September 15, until freeze-up, but as soon after mid-September as possible. Late planting misses opportunity to generate new feeder roots which prepare the plant for immediate growth next spring. Place in fertile, well-drained soil that has been worked 18 inches deep. Rotted manure and some superphosphate is worked in the subsoil, then top soil added and the root division set in this at a height to allow two inches of earth over the crown buds. The root division should have three to five eyes, or long buds. Larger divisions may have difficulty in establishment. Spacing of four feet is desirable. Later planted material should be accorded a straw mulch.

Oriental poppies should be planted as root cuttings or root divisions in August in fully sunned locations and preferably in clay loam that is well-drained. Water collecting around their crowns may soon be fatal. Plant before September in consideration of their early resumption of second growth.

Trees, shrubs and vines are safest planted on the open Canadian prairies in earliest spring while soil is moist and cool and before the evaporation rate is made rapid by hot weather. However, as autumn planting is likely to be convenient for the gardener, comment based on local observation follows:

Spruce move very successfully in mid-August. Dig with a generous ball of earth and hold it tight with burlap. Set at about the same depth as the plant was formerly. Tramp in firmly. Water generously. If only a small ball of earth is moved, it may be necessary to thin out about one-third or one-half of the side branches to balance root loss. A conifer is unceasing in giving off moisture from its leaves, although transpiration is much reduced in winter. The importance of ample soil moisture is obvi-

(Continued on next page)

GARDENER ON QUEEN MARY

By
J. W. Johnston
in N. Y. Herald-Tribune

The sign read, "Gardener's Store." The address, a temporary one, was Sun Deck, port side of the liner Queen Mary, 1,657 miles out of New York.

There I met one of the world's most unusual gardeners, Eric Alfred Littaur, London-born son of French and Swedish parents. He is a combination florist and gardener to the Queen Mary and daily faces problems which garden makers ashore never encounter.

In Mr. Littaur's store were extra flowerpots, soil, baskets, ribbons, trowels, watering pots and a full-size florist icebox loaded with cut tulips, roses, carnations, bulbous iris, orchids, gladioli and other flowers in great variety, planned to meet any emergency social event that might occur on the voyage of a mighty ship.

Potted plants, of which the Queen uses 800 to 1,000 on each round trip, are loaded at Southampton and New York. Some 200 plants such as ferns, bay trees and a few other foliage plants are maintained for several voyages. With about twenty-five voyages a year, the Queen consumes 20,000 to 25,000 potted plants annually, with a change each round-trip.

Plants in 100 Locations

Mr. Lattaur, who is forty-five, has had a varied career, much of it at sea, though for a time he ran his own florist's shop in England and passed several years working for commercial plant growers in that country. In the merchant service during the last war, he sailed with two ships that were sunk. One sinking was off Capetown, South Africa, where he was rescued after an hour in the water. The second ship went down in the English Channel. Mr. Littaur stepped from the sinking ship to a French destroyer.

Touring the Queen Mary, I discovered that potted plant groups are maintained at 100 locations. Most of these are flowering plants that vary with the season. This being an Easter voyage, lilies, azaleas, primulus and a few geraniums were predominant. During the Christmas season, poinsettias would be the feature flower. In addition, cut flowers in great profusion are displayed in the dining rooms, smoking lounges and in the captain's cabin.

The master of the Queen, Captain George E. Cove, not only likes flowers but has a favorite. Each year in his own home garden sweet peas are planted with great care, though members of his family do most of the tending because of his busy life at sea. The captain's real hobby is wood carving.

Most of the plants on the ship are used in alcoves and boxes placed at strategic points by the original designers and decorators of the vessel. Bay trees in both pyramidal and globe form are anchored with metal clamps so that weather disturbance cannot shake them loose. Little breakage of pots occurs even though, as Mr. Littaur said, during this voyage there was a time when his pots were fairly hopping. Weather variations that would drive a terra firma gardener insane are frequently encountered.

The Easter voyage furnished a fine example of this fact. First, there were forty-eight hours of extreme roughness and great weather change. For several hours the first night a full-fledged blizzard raged, with most of the passengers confined to their cabins. This weather was followed by tropical weather, then by breezy weather not calculated to aid tender plants. Despite all this, both plants and cut flowers throughout the ship were fulfilling their mission as we disembarked at Cherbourg.

Has a Garden at Home, Too

Every fifth voyage, members of the crew of the Queen Mary spend a round-trip voyage at home. During these periods Mr. Littaur goes on a busman's holiday. His home at Christ's Church, Hampshire, England, has an acre of land. Fine lawns and two pools planted with lilies and stocked with goldfish are part of a well planted area that contains many varieties of flowering shrubs, trees, perennials and a small vegetable garden. Fruit trees include cherry, plum, apple, cabnut (filbert) and other plants. A young boy is the garden keeper during voyages.

Mr. Littaur has been a devotee of botanical gardens for years and spends time visiting these institutions during shore leaves. Among those visited, in addition to England and the United States, is the botanical garden in Ceylon, which he lists as one of the most interesting. His great disappointment in life, since he is a follower of the cinema, is the fact that movie actors, both male and female, traveling on his ship seem to care the least for flowers. He has no explanation for this situation, but is determined to find the answer.

FALL PLANTING OF GARDENS

(Continued from Page 118)

ous.

Fruit trees of one and two years of age and many young shrubs and ornamental trees may be transplanted with success in early autumn. The second week of September is preferable so that roots have time to grow and anchor the plant before winter. Strip all leaves off before digging. Set in large holes, with roots spread out comfortably, and not bent to fit the hole, and at a depth where the "collar" or place where stem becomes root is, at most not more than two inches below ground level. Overlp deep planting is commonest cause of failure. The bark becomes soft and spongy leading to decay. Such often is seen with lilacs.) Water freely. A three-inch mulch of leaves or strawy manure about the freshly planted stock conserves moisture. Roses are adapted to fall planting. Mound with a cone of earth eight inches high before freeze-up.

Raspberry, gooseberry and currant plants give pleasing results when transplanted the second week of September as root divisions. Apply manure mulch in late October.

Buying nursery stock in October for spring planting is good practice. The gardener then orders from a full stock, has the desired plants on hand for April planting and is able to form planting plans with assurance. The stock is "heeled-in" a trench sloping at 45 degrees angle or flatter and at a depth of at least a foot of soil over the rooots. Plants are given comfortable room, one layer thick, packed with pulverized soil and thoroughly watered. At least half way up on the stems soil is shovelled. The location should be sheltered.

GARDEN CLUB GLEANINGS

By

Mrs. G. M. Jorgensen

Mrs. Jorgensen

It's Your Convention, Don't Miss It!

Convention time is almost here, and this time we should be able to please everyone. The theme is PLANT SOUTH DAKOTA, so we should all be vitally interested in it. Every number of the horticulture program is based on the theme. Three sessions of the six-session meeting will be devoted to a bird's eye view of plantings accomplished, and plans for the future of such planting, according to the program chairman, Dr. S. A. McCrory. "Let's Make Our Plan," scheduled for Friday morning, is a panel discussion with Governor Mickelson as the featured speaker. Garden clubs will have their inning in "What Local Groups Are Doing to Plant South Dakota" on Thursday afternoon; while the offices of Soil Conservation, State Parks, Experimental station of State College, State Forestry and State Highway will present their respective work in the all-over picture of state plantings Thursday morning. See the complete program elsewhere this month. Never before has a convention theme been more comprehensively correlated, and Mr. Dybvig was so proud of it that he is presenting it at the convention of the American Nurserymen in Washington, D. C.

Wednesday, the first day of the convention, should go down in garden club memory books as the most outstanding in convention history. It will be predominantly National Council, with at least three nationally renowned garden club personalities on the program. Mrs. Leonard Slosson, Los Angeles, Calif., President of the National Council of State Garden Clubs, is expected to be present, while our favorite second vice president, Mrs. Mattocks, Boulder, Colorado, and Regional President, Mrs. Wm. Parkinson, Omaha, Nebr., have both accepted invitations to be with us. In addition, President Atkinson has extended invitations to the National Blue Star Chairman, Mrs. J. E. Dvorak, Sioux City, Iowa, and to all the state presidents in the region to attend.

Social events on the calendar mark a new high in South Dakota horticulture conventions as our hostess clubs, Fair City and the Huron Garden Club, have them planned. The first event is a Courtesy Tea to all officers of the National and state organizations, and to all club presidents. Here's where we get acquainted with each other; where we meet all these folks we've read about, and where we grasp the hands of friends we've made in Garden Club land. This get-acquainted Tea is by courtesy of the two Huron clubs and convention chairmen, Mrs. S. L. Johnson and Mrs. H. B. Merritt. Following close upon the Tea will be the big Norwegian Smorgasbord of which Mrs. Merritt says, "The Lutheran Ladies' Aid really put on a very respendant affair with gay costumes and good food." There will be further entertainment after that of Kodachrome slides and talks.

From this event you will have to tear yourself away in time to get in a few winks of beauty sleep before the Garden Club breakfast at 8:00 Thursday morning. This is for Garden club members only, and will include very brief talks from the outstanding visitors as well as a talk by our own enthusiastic Mrs. Baughman, concerning her trip to National Council. We promise you will like this, but will let you get away in time to attend most of the horticulture session that same morning.

Thursday afternoon you will also want to hear the general session numbers and 'Garden Club Activities That Score"; by popular request, there will also be a speaker on flower arrangement for those who are especially interested in that phase of gardening.

Friday afternoon will be another important one for Garden club members and committee chairmen when business reports will be given, election of officers accomplished, and the new members of the official family formally installed into office. I just don't see what you can miss, so you will have to plan to spend all three days at Huron September 27, 28 and 29! Make your reservations early to make it easier for the hostesses to place you. Write to Mrs. H. B. Merritt or Mrs. S. L. Johnson and state what type of accommodations you wish. Hotel, cabins or private room rates will be quoted on request, from $2.00 on up. Hotel prices are not available for publication.

Your credential cards and Convention call will go out this month, see that every club member who could possibly go is contacted, and given the details. Registration for official delegates is $1.00, but you may have as many visitors as you like. Invitations for the 1951 convention will be welcomed. Please bring your scrap books or other interesting data for display.

Year Books

This is the last call for year books. We now have three more books added to the list, Brookings, Fair City and Madison, making 18 for the contest When we get year books as precious as some of these, we know why we keep on with this work. Madison's book shows the effects of closer study and cooperation with National Council projects and with national issues. If you haven't entered a program yet, do so before September 1st.

Note to Club Correspondents

Are you keeping your corresponding secretary informed Are all club presidents and state chairmen receiving the National Gardener Each club should be receiving at least one copy of the National Gardener, and National Council has asked us to send a new and correct list of these officers. If you do not write to us we have no means of knowing when you elect new officers. If the roll call of the clubs as published in this month's Gleanings is incorrect, let us know.

All clubs and individuals, too, should receive the South Dakota Conservation Digest. There is a wonderful article on insects in South Dakota trees, and the remedy for them, in the July issue. Write to the State Highway Department, Pierre, S. D. It's free.

Roll Call of the Clubs

Aberdeen Garden Club — Robert Fritsche, President—Twentieth anniversary dinner honoring six charter members, Mr. and Mrs. J. E. Kelly, Mr. and Mrs. Leon Wells, Mr. and

Mrs. Alan Williamson, and Mrs. Helen Howell Gamble who organized the club. They bought 50 peony roots to plant in the city parks. Mrs. D H. Wilde, secretary, reporting.

Britton, Home Garden Club—Mrs. Ray Jarrett, President—Encouraged Hopa Crab planting this spring. entertained other garden clubs at a flower arrangement program on June 23. Mrs. A. C. Bonham, reporting.

Brookings Garden Club—Mrs. Gilbert Gilbertson, President—Sponsored the Tulip Tea in May, and a big June flower show with 63 classes and many beautiful arrangements displayed against a silver background. Mrs. F. M. Tietze and Marcus Maxon, judges. They had 27 present at the garden tour meeting. Miss Laura Sexauer judged the Sioux Falls Tulip Show, Mr. Gilbertson showed slides of flowers taken during the famous Garden Week at Natchez, Mississippi. Mrs. Van Dusen Fishback, Mrs. U. J. Norgaard and others reporting.

Brookings, Good Earth Garden Club—Mrs. Leo Montieth, President —Second Annual Delphinium Tea highly successful. with guests from many other clubs, including Britton, 175 miles distant; speaker, Mrs. Elsinger from Dell Rapids. Observed National Flower Shut-In Day, June 10. Established Sunshine fund. Land-Landscaping plans drawn up for the new Water Tower Park. One whole lot will be landscaped and ground prepared for fall planting of hardy shrubbery and perennials, with additional plantings scheduled for spring. Guest speakers have been Mr. Ray Clark, Doland and Leonard Schrader, State College. Mrs. Montieth and Mrs. Harry Kennard, reporting.

Canton Garden Club—Mrs. Fred Burke, President—Very good flower show and plant sale June 10, with invitations to other clubs to attend. Mrs. McAnnally, reporting.

Castlewood, Sioux Valley Garden Club—Mrs. Al Tillma, President.

Centerville Garden Club—Mrs. Peder Anderson, President (Where's that year book?).

Chancellor Garden Club—Mrs. H. C. Winterboer, president.

Crooks—Rural Garden Circle—Mrs. Ernest Hamstead, President.

Dell Rapids Garden Club—Mrs. L. G. Elsinger, President—Tulip Tea in May; Arbor Day planting of 50 flowering plum trees; City park flower beds; planted hospital flower beds; over 100 plant gifts to the I. O. O. F. Home; June Flower Show with nearly $100 in prize awards, and many junior classes. Mrs. Joe Flamo, secretary.

De Smet, Friendly Garden Club—Mrs. Ed Brinkley, President.

Flandreau, Green Fingers Garden Club—Mrs. A. J. Ziegler, president—Conservation program with E. K. Ferrell, State College, as the guest speaker, and out-of-town clubs as guests. Mrs. Florence Dewar, reporting.

Highmore, Sunshine Garden Club —Mrs. Jake Zilverberg, President—Delightful Tulip Tea, June 2; profitable plant sale, the trees and shrubs being purchased at wholesale for resale locally. Miss Bertha Christensen, reporting.

Hurley, The Green Thumb Garden Club — Mrs. Menholt Christensen President—Over 250 signed the guest book at the big flower show, June 21. This is something different in flower shows—no judging, no prizes; but six general divisions with a chairman responsible for each division. All entries were labeled with

(Continued on Page 128)

THE NEW ERA IN INSECT CONTROL

By
J. A. Munro

J. A. Munro

The last decade has brought about a new era of improvement in insect control. It is new, largely because of the recent recognition of the valuable insect killing properties of several organic compounds and their advantages over the older insecticides. First will be considered the chlorinated hydrocarbons.

The Chlorinated Hydrocarbons

Their chief advantages include combined action as contact and stomach poisons and a lasting toxic or residual effect against insects. Most of them are incompatible with lime or other strong alkaline materials. Hence, when applied to lime (white washed) surfaces or included in mixtures containing lime, there is a marked lowering of their toxic action on insects.

They are a related group of insecticides and are now available as wettable powders, emulsifiable concentrates, dusting mixtures or as solutions. The wettable powders and emulsifiable concentrates are available in various concentrations (usually 25 per cent and 50 per cent concentrations of actual toxicant). The user must bear in mind that it takes approximately four pounds of a 25 per cent wettable powder, or two pounds of a 50 per cent wettable powder to equal one pound of the actual toxicant. The same rule also applies for emulsifiable concentrates except that liquid measure is used. The user will do well to observe the manufacturer's detailed instructions which appear on the label of each formulation.

For most kinds of spraying either the wettable powders or emulsifiable concentrates are used. When wettable powders are used the resulting suspension must be agitated or otherwise kept in motion while the spray is being applied to prevent settling of the particles. Such precautions are seldom necessary for emulsifiable concentrates because they mix readily with water, and remain in suspension. The dusting mixtures are usually obtainable in the ready prepared form for application. The solutions contain a stated amount of the toxicant in a solvent and are used mostly as sprays or as aerosols for controlling household insects.

The group includes DDT and several analogs or related compounds each of which will be introduced by its commonly accepted name and followed by chemical formula and a brief discussion of its more important uses.

DDT ($C_{14}H_9Cl_5$) has been adopted as the universal abbreviation for the chemical, dichloro-diphenyl-trichlorethane. This important organic compound was first prepared in 1874 by Othmar Zeidlar of Germany, but was not recognized as an insecticide until the late 1930's when Paul Muller of Switzerland demonstrated its toxicity to insects. The chemical was used extensively to control potato beetles in Switzerland in 1939, and in 1949 a patent was obtained on the preparation. In 1942 a sample was submitted to the U. S. Dept. of Agriculture whose entomologists confirmed it as especially useful in the control of lice, mosquitoes and other insects responsible for the transmission of human diseases. Production in the United States rapidly followed with the result that DDT came into timely and valuable use by the military in controlling insects responsible for spreading typhus, malaria and other diseases of medical importance.

Coincident with its wartime use, limited amounts of DDT were made available to federal and state experiment stations for research on its uses, with the result that at war's end in 1945 enough information on it was accumulated that agriculture and other industries absorbed the output no longer needed by the military. About 45,000,000 pounds of DDT was manufactured in the United States in 1946 with the resulting displacement of some of the old time, less effective insecticides.

DDT is highly effective in controlling mosquitoes, flies, fleas, bugs and many other species but it has its limitations. It is of little value against grasshoppers, roaches, beet webworm and a few other insects. It is considered useless against mites. Its use in orchards, greenhouses, and gardens often result in a rapid build-up of mite populations because it fails to kill the mites, yet destroys their natural enemies.

When applied at the recommended rates, DDT is harmless to plants except for squash, melons and other cucurbits which become stunted as a result of DDT application. DDT is used to advantage in the treatment of extensive mosquito-ridden areas because it not only destroys the mosquitos already present but its residual effect usually continues for two to three weeks to kill the mosquitos which drift in on prevailing winds from the outer, untreated areas.

DDT has widespread use in the spraying of buildings and livestock, (except dairy buildings and milk cows) for control of flies and related pests. In addition, dairy cows should not be allowed to feed upon pastures or other fodder that has recently been sprayed because of objection to the DDT getting absorbed in the milk and its danger to public health. An investigation conducted at this station in 1943 showed that mere traces of DDT began to appear in the milk in about 60 hours after the cows had fed upon the freshly sprayed pastures.

DDT is especially useful because of its lasting action against insects. This, however, will vary with the conditions to which it is subjected. When applied to outdoor vegetation the residual toxicity seldom extends over more than two to three weeks because of new plant growth, and exposure to weathering which causes the chemical to deteriorate, but when applied to buildings where it receives protection from the weather its effect is considerably extended.

Its long lasting action against insects in buildings was demonstrated in a fly control experiment conducted at this station in 1944. DDT spray of ¼% concentration was applied to the inner surfaces of a hog barn and several other farm buildings early in August of that year, and although its killing of flies was most spectacular in the first week or ten days, its effectiveness continued until the fly season was over in late September.

The following spring there was still some evidence of its continuing insecticidal action. DDT was also test ed at this station in 1944 against in sects affecting potatoes and cattle lice and in both respects proved to be an outstanding insecticide.

DDD ($C_{14}H_{10}Cl_4$) is also known as TDE, although the first abbrevia tion seems more appropriate since it stands for the three initials of its chemical name, dichloro-diphenyl-dichloroethane. It has also been referred to as Rhothane, or D-3. DDD has residual qualities which are not as long lasting, nor is the chemical as toxic to warm blooded animals as DDT.

DDD has been found to be specific on certain insects and is used extensively on apples for control of red banded leaf roller. It is also finding wide use on tomatoes and other vegetable crops.

Methoxychlor ($C_{16}H_{15}0_2Cl_3$) is also known as DMDT or Marlate. Methoxychlor is however the accepted name. It is an excellent insecticide in many respects, being nearly as effective as DDT against flies and most other insects and yet less toxic to man and animals. It has been used to advantage to replace DDT for the spraying of dairy barns, dairy cattle and other purposes where DDT is objectionable. Methoxychlor is effective against a wide range of crop, livestock, household and industrial insects.

Benzene hexachloride ($C_6H_6Cl_6$) is known as BHC, was discovered by Michael Faraday in 1825 but not recognized as an insecticide until 1943. Most of its early development and production was done in England during World War II. Large quantities of BHC were then used in Africa and the British Isles in the control of grasshoppers, and various other agricultural pests.

In its crude state BHC contains five isomers of which only one, the gamma isomer, is of value as an insecticide. One of the serious objections to BHS has been its disagreeable odor, which has limited its use in the control of insects affecting stored foods.

Recently, however, much progress has been made in refining BHC with the result that a product known as lindane containing about 90% gamma isomer is now available. Coincident with increasing the gamma isomer content its insecticidal value has been increased and its objectionable odor has been diminished. Lindane is now a highly recommended insecticide for spraying livestock for control of mange mites and is a recommended seed treatment for destruction of wireworms in the soil.

Chlordane ($C_{10}H_6Cl_8$) is an effective insecticide and is used with outstanding success in the control of grasshoppers, crickets, roaches, ants and housseflies. It is an effective control of chiggers, sheep tick, ticks, mange mites and box elder bugs. It may be used in bait, sprays, or as dusts against grasshoppers and black field crickets. For control of ants it may be applied as a spray or dust with excellent results. For the control of roaches and box elder bugs good results are had by applying the emulsion spray or a ready prepared household solution containing 2 per cent chlordane.

The residual or lasting effect of chlordane, like most other organic insecticides, varies somewhat upon weathering. In field use against grasshoppers at 1 lb. per acre its effectiveness continues for about three weeks, which is long enough to extend over the hatching period of these insects. Most satisfactory protection of crop land is obtained by spraying the hatching areas soon after hatching begins, and before the young have dispersed and become widespread. The recommended rate of application ranges from ½ to 1½ pound per acre of actual chlordane. The lower amount is used when applied as a spray to control the young 'hoppers.

Where chlordane is used in buildings and other protected places the period of protection appears more lasting. This was demonstrated here in an experimental application of a 2 per cent chlordane emulsifiable spray to the floors and baseboards of a local building overrun with roaches, May 7, 1947. It not only gave quick control of the insects in the building but its lasting effects were observed to continue up to 16 weeks following the application. Although frequent inspection was made, no roaches were observed again in this building until the first week in September—and then only a few. Black field crickets (young and adults) were frequently observed to enter this building in late summer but were usually killed within one or two hours after they had entered by the continuing lethal effect of chlordane.

Toxaphene ($C_{10}H_{10}Cl_8$) is an effective insecticide in the control of grasshoppers, field crickets, armyworms, sugar beet webworms, lice, horn fly, sheep tick and insect pests of cotton. It is used at a higher rate than chlordane but, being lower in price, represents about the same cost on the per acre basis. From 1 to 2½ pounds of toxaphene per acre is recommended for control of grasshoppers. Our experience has indicated that toxaphene, as well as others in this group, tend to lose their toxicity faster when applied during periods of hot weather.

In tests conducted at this station in 1947, using both chlordane and toxaphene, excellent control was obtained when applications were made during periods when daily temperatures ranged from 70°F. to 80°F., but as temperatures increased above 90°F. the control became noticeably poorer.

Aldrin ($C_{12}H_8Cl_6$) formerly known as Comuound 118 and Dieldrin ($C_{12}H_80Cl_6$) until recently known as Compound 497, are new preparations which show valuable possibilities in the control of various pests. They may be used alone or combined with certain other insecticides such as DDT to advantage. They are effective at low dosages and are compatible when mixed with most other materials. Further evaluation of these insecticides is desirable. They are not as yet readily available. These are the only alkali stable compounds in this group of chlorinated hydocarbon insecticides. They are not adversely affected by lime or high soil pH.

The Organic Phosphates

Three organic phosphate compounds have come into extensive use during the past few years. They are TEPP (tetra-ethyl-pyro-phosphate), HETP (hexa-ethyl-tetra-phosphate) and Parathion. They are more effective in the control of aphids, red spider mites and some greenhouse pests than other chemicals in common

(Continued on Page 128)

BOOK REVIEWS

By

Mrs. L. N. Brakke

Mrs. L. N. Brakke

Nutrition and the Soil. Thots on Feeding. By. Dr. Tionel James Picton. Published by The Devon-Adair Co., 23-25 E. 26th St., New York 10, N. Y. 374 pages, price $4.

This book is written by a British medical doctor in the hope that all English speaking people, reading this book, will improve their health by correct eating. He believes that the U. S. A. is the world's best fed nation but chronic illnesses and deficiency diseases are on the increase and that mental illness and nervous disorders have become a frightening problem. Judging from examinations of armed forces, half of the population is way below par. He believes that nourishing food can only come from crops and animals raised on organically fertilized soils, that too much chemical fertilizers are being used, and that many of our illnesses come from the food we eat. After reading this book one wonders if most of our foods are only "fillers" with no real nourishment. He says that the modern methods of refining foods are responsible for the loss of much needed minerals and vitamins, which would make them healthful foods. Tho written for the British Isles, the basic truth of this book applies to all modern countries, as everybody eats, and should know what to eat.

Plant Ecology, by W. B. McDougal. Published by Lea & Febiger, 600 Washington Square, Philadelphia 6, Pa. 234 pages, 118 illustrations. Price $4.

Plant ecology is essentially a field study, it is also one of the most practical of the sub-divisions of botany, the basis of practice in agriculture, forestry and the modern phases of conservation. The contents of this book covers the following: the ecology of roots, stems and leaves; pollination; growth habits of plants; heat; air, soil-water; plant succession; plant communities and their distribution in the United States. The book supplies such facts, not only for the student but for the general public. Several books of references are given after each chapter for further reading. The kinds of plants that one may expect to find in any community depend upon the factors of environment, for just as we, in order to live and be healthy, must have homes that are adequately supplied with heat, light, water and food, so the plants in their homes are affected by these same factors. Criticisms are welcomed by the author, and are hereby solicited, for in the criticisms will lie the hopes of a better book in the future.

Sioux Falls, In and Outdoor Garden Club—Mrs. M. E. Schirmer, President.

Sioux Falls Garden Club — Don Johnson, President — YMCA flower beds planted as usual; two-day flower show held June 17-18, with the wife of Mayor Saure winning sweepstakes in the peony classes. Mr. W A. Simmons reporting.

Sioux Falls, South Sioux Garden Club—Harold Limmer, President—Spring flower show set for June; to be on non-competitive basis with three door prizes awarded; five divisions for entries. From Argus-Leader news item.

Sioux Falls, Nature Followers—Miss Joan Giever, President.

FRUIT AND VEGETABLE NOTES

By
F. X. Wallner

F. X. Wallner

The box of Bing cherries that son John sent us, express prepaid, from Richland, Wash., were most all spoiled because of direct neglect by the express company here holding them over the Fourth of July holiday. In my phone to headquarters, I told them that had the express not been prepaid, they perhaps would have made an effort to notify us. There was some one near the telephone so I informed them it was deliberate neglect. The spraying and dusting of vegetable crops has been a job of major importance this year. The potatoes, while sprayed only twice, are free of all insects. Corn also sprayed twice, but we can hardly hope for wormless sweet corn later. Vine crops have had to be dusted more than last year and the striped beetles are still with us. Tomatoes, peppers and eggplant have had no treatment since set in the field, but treated in the flats at planting time; surely saves loss from cutworms by following this treatment. Spraying for weeds in onion, carrot and parsnip patches has been more successful than in former years and these crops are in nice condition at this time. The boys have done a good job in cultivating so that our crops are in better condition at this time, July 12th, than any year in my life time gardening. In spite of the dry June, we have done little irrigating and had set up the pump one day in our potato field before showers of July 11th, and the potato vines here are hip high, and not a hole in a leaf. Proper cultivation sure saves moisture in vegetables gardens. Some of the Garden club members are becoming expert pie bakers. I mean the women that make those good blueberry pies from the garden huckleberry, or wonderberry. We have two long rows of them and they will come into early bearing, so anyone can pick up enough for a few pies. Our early set cabbages will be about cleaned up by the 20th, and the weather has been favorable for our cauliflower and broccoli, also picked 3 bushels of tender summer squash today. Keeler's Gardens, across Phillips avenue to the east, have fenced their new planting of strawberries and have a large flock of geese, that are supposed to do the weeding; it sure beats spraying and hand work. He also advised us that his potatoes passed first inspection for certification, of the crop this fall. During the extreme heat wave in Arizona, 1,300 car loads of cantaloup were shipped out in four days, quality went down and much damage to crops resulted. 110 to 115 dedgrees temperature has damaged the grapes 25%, also the tomato crop and over 3,000 acres were left unpicked, as the extreme heat stopped all operations. July 16th. Another good shower this afternoon should hold off irrigation for another week and all crops here are in first class condition. Potato acreage, planted this year, is supposed to be less than any year since 1876, still we will have a 400 million bushel crop. This is only 3% less than last year or the 1939 to 1948 average. The yield is to be 214 bushels per acre which is 2 bushels below the record high of 1948 but 3 bushels higher than the acre yield last year. The five north central states will have over 60 million bushels, or 11% under the last year, or 17% below average yield. South Dakota is one of the few states in which prospects are below average. Most all states planted less acres but expect higher yields than former years. California's 455 bushels per acre yield of last year will be cut to about 400 bushels per acre. North Dakota will have 20 bushels to S. D.'s one bushel. The declining consumption of potatoes and the high yields, looks like more dumping of potatoes before spring. The following, from a Dept. of Agriculture release, shows how our plant breeders utilize the different growing conditions provided by the varying climatic conditions found in this great country of ours, to speed the production of seed from the new and improved varieties of vegetables they have produced:

"A new and better onion developed by the U. S. Dept. of Agriculture and the Texas Agricultural Experiment Station comes to the truck crop stage as what might be called a 'curtain raiser' or 'stop-gap.' Breeding and growing methods have been speeded up to get it to onion planters only three years after the selection of a promising parent bulb. The breeders know, however, that it will not be a favorite variety for more than a few years at most. They have even better varieties coming. The new 'Crystal Wax L. 690' lacks disease and pest resistance which coming new varieties will have. It has not yielded quite as heavy a crop as Excel, introduced a few years ago, and is a few days later. But it is an improvement on its parent in producing fewer double bulbs, is more uniform in color, and has less tendency to 'bolt' or go to seed. Thus it is enough better than onions now available to warrant releasing it to growers until the still better onions are ready to go.

The rapid multiplication of this onion is an example of quick results possible by taking advantage of growing conditions in widely separated places. A superior onion, Plant No. 3435, selected from Crystal Wax, was grown in the greenhouse at Beltsville in the spring of 1946. This was self-pollinated. The seed was planted on a farm near Laredo, Texas that fall, and a crop of bulbs harvested. These were planted in July, 1947 on irrigated land at Greeley, Colorado. The Greeley bulbs were shipped back to Beltsville and seed grown from them in the greenhouse in the winter of 1947-48. This seed was used in seed-to-seed cropping in Arizona. Seed harvested last summer—100 pounds of it—is now going to commercial seed growers for building up to commercial quantities for supplying the onion growers."

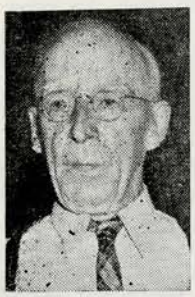
Pierre Garden Club—Mrs. R. K. Morrell, President—Projects begun are a club library, plant propagation for a plant sale, fall flower show, and planting an old watering trough to flowers to be displayed in a prominent spot. Delightful story of the inspection tour to the homes of Mr. Vandercook, Judge Williamson and Mrs. Fifield, written by Cecelia Cudmore.

Sioux Falls, Wednesday Garden Club—Mrs. Chas. Rysdon, President.

Vermillion Garden Club — Mrs. Edith Abell, President.

SECRETARY'S CORNER

By
W. A. Simmons



W. A. Simmons

Extolled be he that invented summer, even tho at times the suspicion must intrude that it was done to make us think this section is inhabitable, to make us forget the long cold winters, with the snow shovelling and the struggle to obtain coal to keep us from freezing, and which John L. Lewis sometimes acts as tho he didn't want us to have. This has been an unusually pleasant summer, with plenty of cool periods and an absence of mosquitoes, gnats and flies. In evenings I repair to my rocking chair, in the outdoor living room, with a paper in my hand, intending to read. But I seldom get any reading done, there is so much to distract me there; a view of the garden with its many blossoms and a sight of the many and busy birds. A mother brown thrasher with two handsome youngsters, as large now as the mother, seem absolutely fearless, and will come within six feet of me, as tho they were convinced no human would be mean enough to harm them after the lovely music they had made while nesting. Just now the mother is schooling the youngsters in the art of making a living, tho she still has to hunt up most of their food. A wren family is now working to produce its second family and the male puts in 15 hours a day with his pleasant song. Evidently there are no labor unions among the wrens, with their demand of a 40-hour week with 48-hour pay. A gorgeously colored grackle comes to the bird bath with a sizable piece of bread, which he dunks in the water and then carries off home to his babies. One wonders if he learned this trick from observing a picnicker dunk his donuts, or perhaps the donut dunker learned it from the grackles.

We are in receipt of a very interesting bulletin from the New Hampshire Station, Durham, N. H., written by our friend, Dr. A. F. Yeager, telling of his recent introductions of vegetables he has originated. Probably any of our members can get this bulletin by writing that station and enclosing 10 cents, which is the usual fee for out of state readers. Some day, I hope a complete list of Dr. Yeager's introductions will be collected and printed, as was done in the case of Dr. Hansen and Luther Burbank. The time for compiling this list probably has not come yet, as Dr. Yeager is still turning them out, much to our profit.

Am in receipt of the program for our annual meeting at Huron and Mrs. Jorgensen wants me to write something about it, prior to its being printed in the Sept. magazine, tho I think she has done a creditable job of selling it to you in her article. It is a very full program that will keep us interested for the full three days, and I agree with her that one should go to Huron prepared to stay the entire period of the meeting, as I don't see how anyone can afford to miss any of the sessions. Besides the banquet, which will be on Thursday evening, with Col. F. S. Mattocks as chief engineer, there will be many teas, feeds, etc. One of them is called a Smorgasbord, whatever that may be, tho I am reliably informed that to our Scandinavian friends, it means good eats, where one wanders around a table annexing choice morsels for his plate, with only his conscience for a guide. The program lists many good and competent speakers, including our good governor. Others on the program include our President, Mr. Dybvig, our State Federation President, Mr. Atkinson, Mrs. Slosson,, the National President, Mrs. Mattock, the National Vice President, both of whom will show colored films; Mrs. Wm. Parkinson, Omaha, regional director; Mr. and Mrs. L. G. Elsinger, Mr. Bush of Yankton, Dr. McCrory and Mr. Ferrel of Brookings; Mrs. J. E. Dvorak of Sioux City, Mr. A. R. Schamber of Rapid City, and many others equally good. Remember you are paying for this meeting and the only way you can get value received is to attend every session.

From the following you can see how concerned the Agri. Dept. is with our health, which is perfectly natural, as everyone connected with the Federal pay roll will want to keep the taxpayer alive and productive as long as possible:

"Since the early 1940's the Food and Nutrition Board of the National Research Council has been drawing upon experimental work and the judgment of scientists to arrive at recommended dietary allowances liberal enough to maintain good nutritional health.

In the U. S. Dept. of Agriculture the Bureau of Human Nutrition and Home Economics translates these nutrient allowances into food plans and market lists. The results indicate need for continuing increases in the production of several important groups of foods, says Dr. Hazel K. Stiebeling, Chief of the Bureau. She says:

'The chief points at which the present per capita consumption in this country would increase if everyone were to follow one or another of our diet plans would be in milk, green and yellow vegetables, and fruits rich in vitamin C. We could well use up to one fifth more milk, up to one-third more fruits rich in vitamin C, and up to one-half more green and yellow vegetables. Then we could correct the under consumption of certain population groups without cutting the desirable more-liberal-than-average consumption of others.

'There are many ways of moving in this direction of diets that are fully adequate nutritionally within the broad normal food patterns of the general population. Some call for shifts in emphasis as among food groups, others for modified choices within common well-known food groups. We can have diets that differ in cost and that make varying demands upon soil and other natural resources, and upon processing and transportation facilities, but which, at the same time, contribute to getter-than-average nutritional health.'"

Wife: A large percentage of accidents occur in the kitchen.

Hubby: Yes, and men must eat them and pretend to like them.—Illini Horticulture.

Grand Canyon Guide: It took millions of years to carve this great abyss.

City Visitor: Government job, eh?

TRANSPLANTING AND TREASURING MOISTURE

By
Mrs. Emma Dixon
Community Garden Club
Miller, S. D.

Soil Exposure

Most flowers like sun, so select a sunny spot if you can. Many of the sun-lovers will, however, tolerate a reasonable amount of shade that does not use soil fertility. Trees will sap so much fertility from the soil that the flowers will not do well in any event, regardless of the amount of sun or shade. This is true of nearly all garden flowers.

Soil Preparation

The first thing to remember in preparing the place for your plants is that they need room. You cannot possibly have a good garden if you set your plalnts tightly together, or if you prepare a hole barely large enough to accommodate the roots. For proper aeration it is best to prepare a piece of ground much larger than needed for the particular plant you are setting. This advice seems hardly necessary since most people plant in gardens where a piece of soil embracing many square feet will be prepared, but still its warning must be repeated: Do not plant your flowers too closely together. If you have a dozen plants to set, prepare room to grow underground as well as above. Some perennials come to full size and form by means of stolons that reach out from the mother plant below the ground, and from which new plants appear. If you prepare a spot only six or eight inches across for your plant, because the plant is small, how on earth can you expect that you are going to be successful in having a large plant in the fall.

If you are planting in a border the plants may be set as closely as 12 to 15 inches apart, for a solid effect; but the strip of soil prepared should still be at least 2 feet wide, and 2½ to 3 feet is better.

Depth for Soil Preparation

Some plants are shallow-rooted plants so it might be expected that they would thrive with shallow soil preparation. Actually they can grow if the soil is naturally open and porous, but if it is not, prepare the soil at least 10 to 12 inches deep. This deep preparation will help to supply that drainage that we talk so much about. Perhaps they can do fairly well in shallow soil, but you as a gardener do not care to dig one depth here and another depth there, so why not dig rather deeply for the entire piece allotted to your spot o' beauty.

The only place you should confine yourself to shallow soil preparation is where there are stones, hardpan, or other impediments just beneath the surface which prevents you from doing anything else; and in such spots confine yourself to flowers that can do well there.

The best depth for soil preparation is 10 to 12 inches. This will accommodate any perennial you care to set. Turn the soil over well—especially note the word, over. Each spadeful of soil should be turned completely upside down, then dropped into position. Use a spade or shovel, turn the soil over well, and mix it and loosen it thoroughly. As long as there are lumps in the soil it has not been really well prepared.

Fertilizing

First, what are the fertilizers that are good for perennials? In most cases good, well-rotted stable manure, or cow manure is best. Leave the hot fertilizers, such as sheep manure and hen manure, especially the latter, alone. Pig manure is inclined to be weedy, but can be used if you use judgment with it. It is not quite so likely to be hot as sheep manure, but should be used more moderately than cow or stable manure. Milorganite and other treated sewage is also good. Commercial fertilizers are a substitute for stable manure if the latter cannot be obtained.

Bone meal, though too slow for some flowers, is good for early fall or late summer flowers for the good in it would be available to the plant at just about the right time to promote excellent flowering. In general, bone meal appliled soon after planting is a good fertilizer for any plants which bloom in late summer.

How to Use Fertilizer

Methods of applying fertilizers are as follows:

1. Dig the hole for your flowers three to four inches deeper than required and put in a layer of manure in the bottom. Add a layer of sand an inch deep, and then fill in the rest of your pulverized soil. This is the method to use if you want to supply drainage at the same time you prepare your soil. It is for use with animal fertilizer only, and is not so good with commercial fertilizers or bone meal.

2. Any kind of fertilizer, except perhaps pig manure, can be mixed with the soil around the plant. An added advantage in this method is that you are pulverizing the soil while mixing in the fertilizer, and thereby doubling your chance for prize-winning flowers.

(Continued next month)

NEW ERA IN INSECT CONTROL

(Continued from Page 123)

use. They are, however, more dangerous to handle, and so, greater care must be exercised in their use. IT IS DANGEROUS TO INHALE THE FUMES OR ALLOW THE SKIN OR CLOTHING TO GET SATURATED WITH THESE INSECTICIDES. Such spray upon getting on the skin should be promptly washed off with water. Contaminated clothing should be replaced with fresh clothes. The operator should observe the additional precaution of wearing a respirator while using these insecticides and and avoid any prolonged exposure to them.

During 1949 approximately 40,000 acres were sprayed in North Dakota with TEPP or parathion by airplane to control infestations of greenbug (grain aphid) in fields of late-seeded wheat and barley. This resulted in 90 to 95% control of the pests within a few hours following application. More lasting protection against these insects results from the use of parathion.

The Piperonyls

The piperonyls include two compounds of somewhat recent introduction. They are piperonyl cyclonene and piperonyl butoxide. Their main advantages are those of being nontoxic to warm blooded animals, but possessing valuable insecticidal properties. They are particularly useful as synergists to "step up" or increase the insecticidal value of pyrethrum and rotenone. They are recommended especially for control of insects in food processing places, and for treatment of such crops as spinach, lettuce, beans and ripening fruits, since their use represents no danger to human health.—Reprinted from the Bi-Monthly Bulletin of the N. D. Agricultural Experiment Station.

GARDEN CLUB GLEANINGS

(Continued from Page 121)

name of exhibitor and name of the exhibit. Educational and beautiful as well as a money-maker, for admissions were 25c, including a light lunch. Four members of the club attended the National Iris meeting at Sioux City and Omaha where they "learned a lot." Mrs. Lee Thompson and Mrs. Christensen judges for two flower shows. Mrs. Francis Nelson and Mrs. Christensen reporting.

Hurley, Junior Garden Club—Mrs. Lee Thompson, Leader.

Huron, Fair City Garden Club—Mrs. Milo Schultz, President—June 2, June 20 and June 23 were all big days in the city of Huron where so many people attend the events sponsored by the two garden clubs; $45 was netted from the Fair City's plant sale at the time of the Tulip Tea; ballots were cast by everyone present to choose a city flower. Ballots in the Daily Plainsman helped to make the choice of the Petunia really a city-wide expression. A tour of Brookings and the test garden field trip was made. Fine publicity and pictures of all events by Mrs. H. B. Merritt.

Huron Garden Club—Mrs. A. A. Wollman. President — Cooperation with the Fair City Garden Club in their second annual flower show as well as the City Flower Contest makes these events more truly representative of the city. Named varieties of the most spectacular flowers in the specimen classes brought up the standards. Peony Grace Batson, grown by Mrs. E. L. Shanahan, was best in the show. Beautiful gardens of nine prominent homes were visited on tour. Mrs. S. L. Johnson reporting.

Rapid City, Better Homes and Garden Club—Mrs. Ernest Haedt, Secretary.

Lyons Garden Club—Mrs. Henry Olson, Colton, President—This tiny town continues to carry on full scale projects. Tulip Tea was attended by more than half the membership of the Rural Garden Circle as well as a car from Dell Rapids. Had 36 entries of tulips in a lovely setting; successful plant sale; also 18 arrangements brought to regular meeting when Leonard Young was guest speaker. Mrs. L. N. Brakke, reporting.

Madison Garden Club—Mrs. D. S. Baughman, President—Sponsoring a whole week of lectures and workshops on flower arranging by a national authority, Mrs. R. O. Powelson of St. Joseph, Missouri, was the major project of the club, with Mrs. Baughman's enthusiastic push and financial backing behind it. Women from nine cities and towns outside of Madison attended portions of the series, and included many of the 300 Extension women of the county. This club has also been sponsoring a series of bird hikes for the Junior club members under the leadership of Miss Ruth Habeger. Sixty Juniors took part in one tour, identifying 37 birds in 45 minutes. Mrs. Baughman, reporting.

Miller Community Garden Club—Mrs. A. B. Crossman, President—Mrs. Emma Dixon sent her paper on Transplanting and Treasurer Moisture. Thank you.

Valley Springs, Tri-State Garden Club—Mrs. Roy Sanford, President—Second Flower Festival June 20th with a guest speaker. Mrs. R. H. Evans, reporter.